

SNAPPER®

21" Series 0 "PLATINUM" WALK BEHIND MOWERS



**REAR DISCHARGE
CAST ALUMINUM DECK**

MODELS: L21550

NL21550

LP21550

NLP21550

ELP21500KWV

See Page 1.2 for Model
Number Explanation

SERVICE MANUAL

SNAPPER® McDonough, GA., 30253 U.S.A.

MANUAL No. 07016 (I.R. 3/95)

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Section I

GENERAL INFORMATION

Section I - GENERAL INFORMATION

INTRODUCTION

This manual contains information pertaining to the overhaul and repair of the **SNAPPER 21" Series 0 "PLATINUM" Walk Behind Mowers**. The manual is divided into sections for servicing specific groups or components. Refer to the Table of Contents.

Reference to **RIGHT** and **LEFT** sides of the mower are determined by facing forward while standing behind the mower at the Operator's position.

WARNINGS, CAUTIONS & NOTES

Some general workshop Safety Precautions appear on Page 1.3 of this manual. Also, Safety Warnings and Cautions appear where appropriate throughout this manual. Notes appear where component damage or misadjustment might result, if the recommended procedure is not followed. These do not cover all conceivable hazards and incorrect use of tools. Always use good common sense!

TOOL REQUIREMENTS

The normal complement of tools found in most repair shops are all that will be needed to repair **SNAPPER 21" Series 0 "PLATINUM" Mowers**.

SERIAL NUMBER LOCATIONS

The Serial and Model Number of the **SNAPPER Platinum Series** is located behind the engine on the discharge tunnel of the mower deck as shown in Figure 1.1.

MODEL NUMBER EXPLANATION

PREFIX	BODY	PREFIX EXPLANATION	BODY EXPLANATION	SUFFIX EXPLANATION
NLP21550		L - Aluminum Deck N - California Compliance Engine P - Self-Propelled E - European Market Model	21 - 21" Cutting Width 50 - 5 hp Engine 55 - 5-1/2 hp Engine 0 - Series Designation	KW - Kawasaki Engine V - Overhead Valve Engine
PREFIX	BODY	SUFFIX		
ELP21500KWV				
CUTTING WIDTH	ENGINE HP	ENGINE OPTIONS	ENGINE BRAND	SERIES

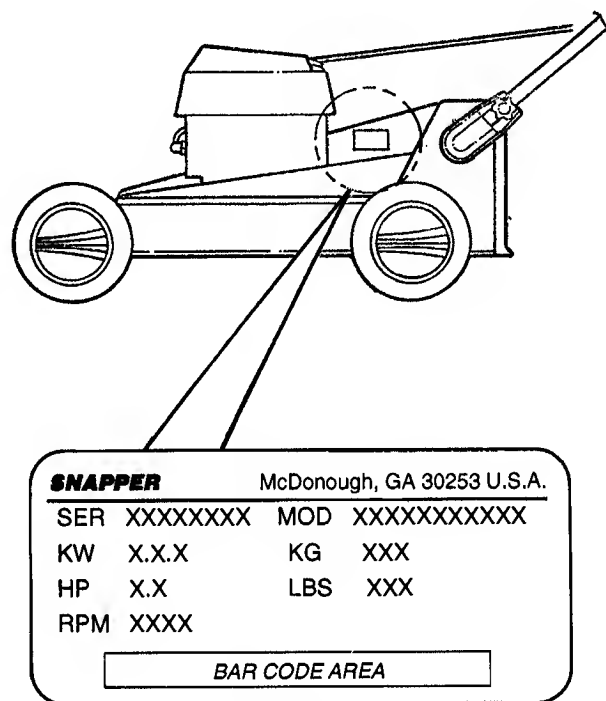


FIGURE 1.1

Section I - GENERAL INFORMATION

SPECIFICATIONS - TORQUE VALUES

Shown below in Figure 1.2 is a Standard Torque Specifications and Capscrew Markings Chart. The values given here are based on the use of clean and dry threads. Reduce torque by 10 percent when threads are lubricated with engine oil and by 20 percent if new plated capscrews are used.





CAPSCREW HEAD MARKINGS				
Manufacturer's Marks may vary. Three-line markings on heads shown below - for example, indicate SAE Grade 5.				
				
SAE 1 or 2	SAE 5	SAE 6 or 7	SAE 8	
CAPSCREW BODY SIZE Inches - Thread	SAE 1 or 2 Torque Ft - Lb	SAE 5 Torque Ft - Lb	SAE 6 or 7 Torque Ft - Lb	SAE 8 Torque Ft - Lb
1/4 - 20	5	8	10	12
- 28	6	10		14
5/16 - 28	11	17	19	24
- 24	13	19		27
3/8 - 16	18	31	34	44
- 24	20	35		49
7/16 - 14	28	49	55	70
- 20	30	55		78
1/2 - 13	39	75	85	105
- 20	41	85		120
9/16 - 12	51	110	120	155
- 18	55	120		170
5/8 - 11	83	150	167	120
- 18	95	170		240
3/4 - 10	105	270	280	375
- 16	115	295		420

FIGURE 1.2

WORKSHOP SAFETY HINTS

DO NOT run engine in an enclosed area - exhaust fumes are hazardous to your health.

DO NOT smoke, light a fire or create any sparks near gasoline - it is extremely flammable.

DO NOT use gasoline as a solvent. Fumes are dangerous. Always use non-flammable solvents.

DO NOT store gasoline in an area where sparks or flames are present, such as near water heaters or furnaces - gasoline fumes are extremely explosive.

ALWAYS make adjustments and do repairs in a well-ventilated area.

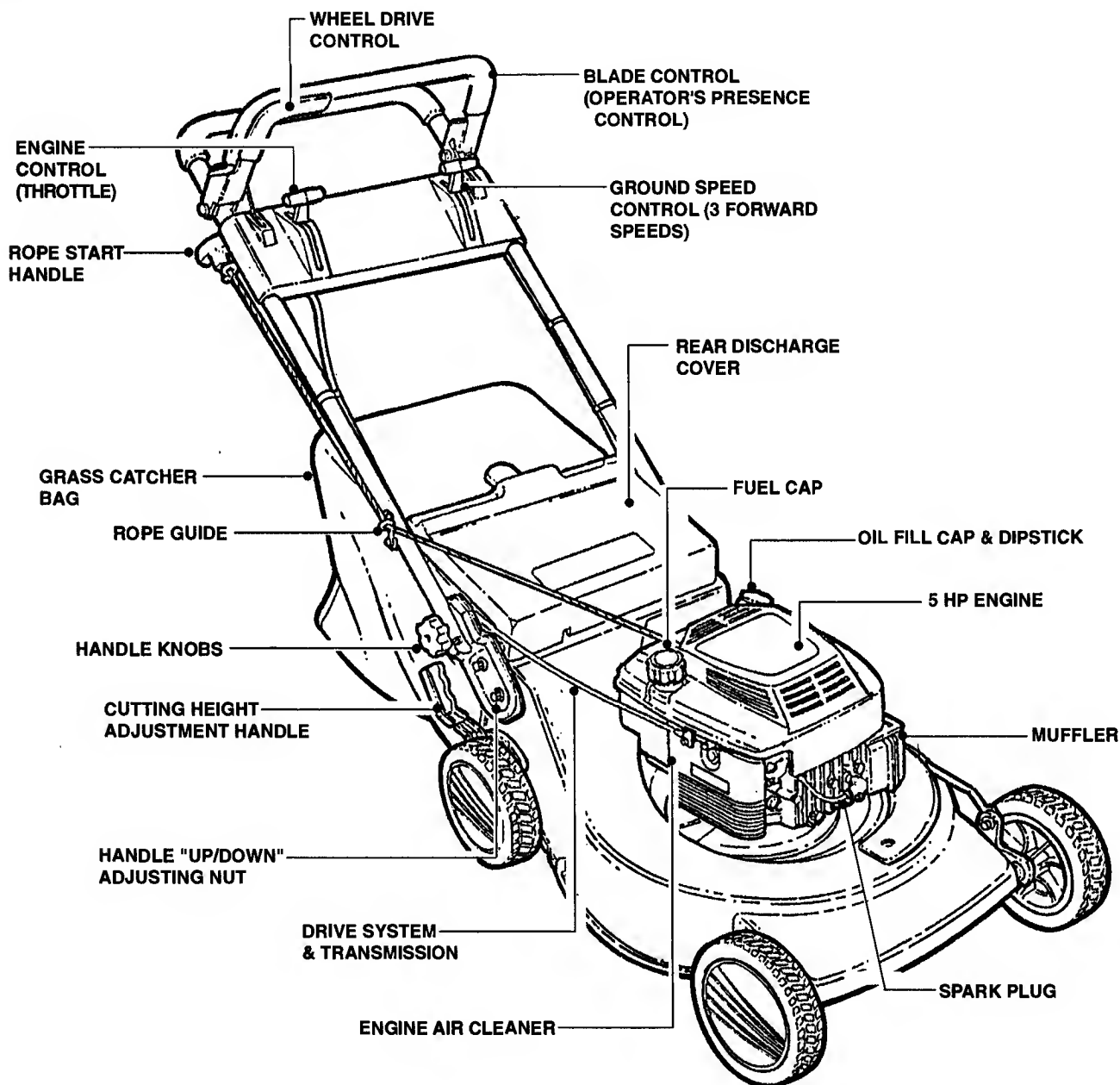
ALWAYS disconnect the spark plug wires and secure the ends away from the plugs BEFORE inspecting, servicing or repairing the LT tractor or mower attachments. Precautions prevent accidents such as accidental startups!

ALWAYS wear protective safety goggles when using pressurized air to clean the machine or parts.

Section I - GENERAL INFORMATION

FAMILIARIZATION

The nomenclature drawing shown below (Figure 1.3) illustrates the major components of the **SNAPPER 21" Series 0 Platinum Walk Behind Mowers** with Rear Discharge, Cast Aluminum Decks. Individual parts drawings and parts lists for the major components are shown on Pages 1.5 thru 1.10.



NOMENCLATURE

FIGURE 1.3

PARTS DRAWING - HANDLE & CONTROLS

**FIGURE 1.3**

Section I - GENERAL INFORMATION

PARTS LIST - HANDLES & CONTROLS

ITEM	PART NO.	DESCRIPTION
1	2-6422	CONTROL, Blade
2	2-6389	CONTROL, Traction
3	9-1645	PIN, 5/16 X 1.43" Clevis
4	2-8434	DECAL, Engine Speed (W/Choke)
-	2-8433	DECAL, Engine Speed (W/O Choke)
5	2-8396	KNOB, Throttle Control & 3-Speed Control (2)
6	2-8436	DECAL, OPC/SP Instruction
7	2-8431	DECAL, Console
8	2-8435	DECAL, 3-Speed Control
9	2-6426	CONSOLE, Control
10	2-8398	CONTROL ASSEMBLY, 3-Speed
11	9-1105	SCREW, #10 - 16 x 1/2" Hex Washer Head, Self-Tapping (8)
12	9-1288	SCREW, 1/4 - 20 x 2" Hex Washer Head, Self-Tapping (2)
13	2-4461	CABLE ASSEMBLY, Blade Control
14	2-3153	CLAMP, Throttle (3-Speed Control) (2)
15	2-3154	SCREW, #10 - 32 x 5/8" Slotted Hex Head, Self-Tapping (2)
16	2-3735	KNOB, 5/16 - 18 Thread (2)
17	9-0391	WASHER, 5/16 Internal Tooth Lock (2)
18	9-1646	NUT, 5/16 - 18 Hex Nyloc (4)
19	2-6436	CLAMP, Double Tube
20	1-1791	RETAINER, 5/16 Bolt
21	3-4329	BRACKET, Handle (2)
22	9-1189	SCREW, 5/16 - 18 x 2" Curved Head (2)
23	7-6978	NUT, 1/4 - 20 Hex Nyloc
24	7-9577	SCREW, 1/4 - 20 x 1-1/2" Hex Head Cap, Grade 5
25	2-2779	GUIDE, Rope (2)
26	2-6219	CLAMP, Cable (4)
27	3-4376	BRACKET, Console (2)
28	2-4562	CABLE, Traction
29	2-8402	CONTROL, Throttle (Brigg's & Stratton Engine W/Choke)
-	2-8397	CONTROL, Throttle (Brigg's & Stratton Engine W/O Choke)
30	9-0365	COTTER PIN, 1/8 x 3/4" (2)
31	9-1076	WASHER, Flat, .343 I.D. x .688 O.D. (6)
32	3-3853	HANDLE, Upper
33	2-6216	GRIP, Foam
34	9-1644	PIN, 5/16 x 1.71" Clevis

Section I - GENERAL INFORMATION

DECK, WHEELS & DISCHARGE COMPONENTS

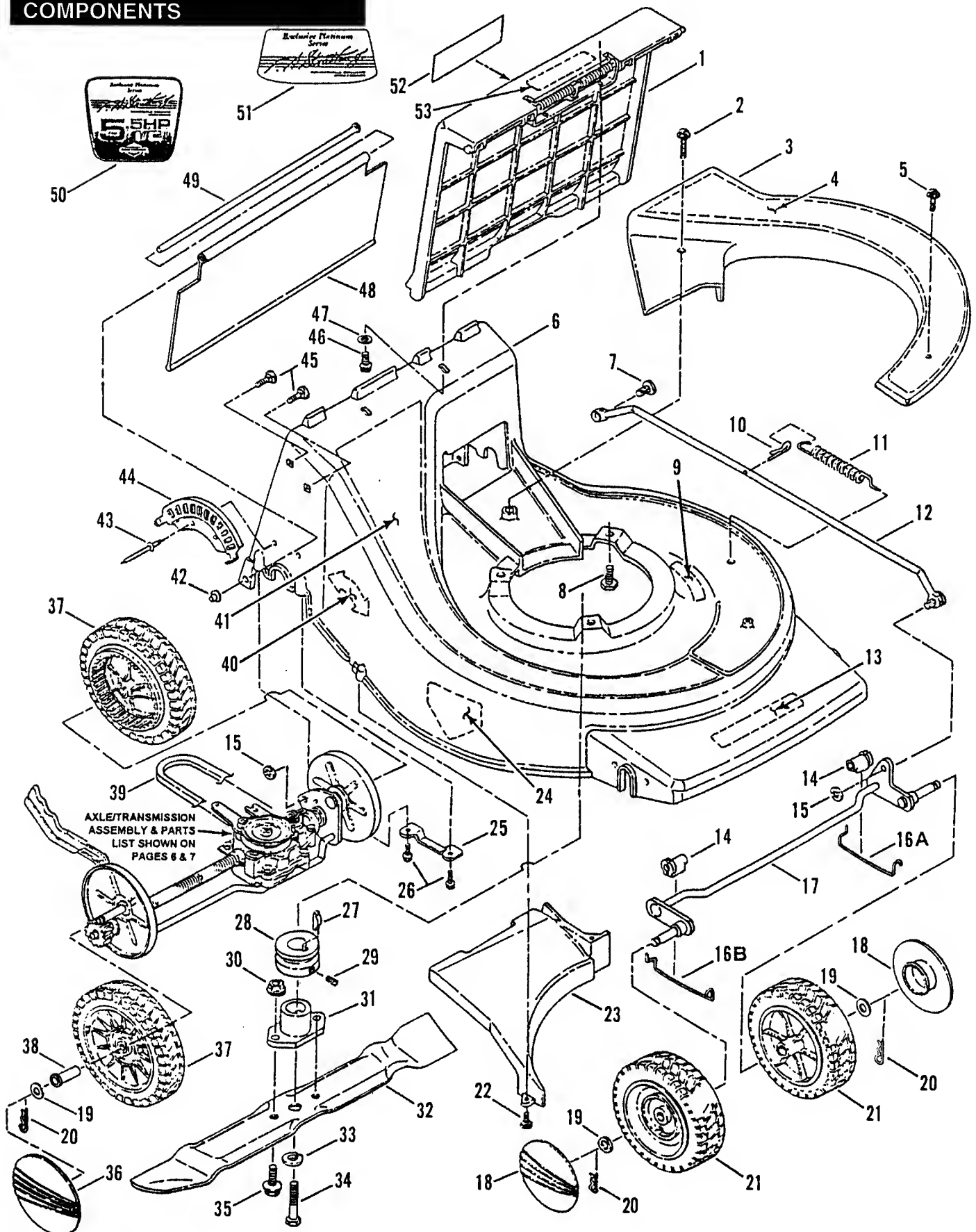


FIGURE 1.4

Section I - GENERAL INFORMATION

PARTS LIST - MOWER DECK, WHEELS

ITEM	PART NO.	DESCRIPTION
1	5-2881	ASSEMBLY, Discharge Door
2	9-1201	SCREW, #10 - 24 x 1-1/2" Slotted, Hex Washer Head, Self-Tapping
3	2-4752	COVER, Belt/Tie Bar
4	2-8443	DECAL, Deck (Left Side)
5	9-1213	SCREW, #10 - 24 x 1" Slotted, Hex Washer Head, Self-Tapping
6	2-8467	DECK, 21" Cast Aluminum
7	9-1232	PIN, Tie Bar, 3/8 x 5/8"
8	9-0324	SCREW, 3/8 - 16 x 1" Hex Head, Self-Tapping (3)
9	2-8440	DECAL - WARNING (Deck)
10	9-0365	COTTER PIN, 1/8 x 3/4"
11	2-4751	SPRING, Tie Bar
12	4-1364	ASSEMBLY, Tie Bar
13	2-8444	LOGO, SNAPPER Platinum Series
14	2-4558	BUSHING, Front Axle (2)
15	1-3946	RETAINER, Wheel (2)
16A	3-4340	SPRING, Axle Retaining (Left Side)
16B	3-4341	SPRING, Axle Retaining (Right Side)
17	4-1344	ASSEMBLY, Front Axle
18	1-6152	HUB CAP, Front Wheels (2)
19	9-1192	WASHER, 1/2" Flat (4)
20	9-1193	HAIRPIN, .062 x .900" (4)
21	2-8456	ASSEMBLY, Wheels (Front) (2)
22	9-1075	SCREW, #10 - 24 x 5/8" Slotted, Hex Washer Head, Self-Tapping (4)
23	2-4595	BAFFLE, Discharge
24	1-3010	DECAL - DANGER
25	3-3732	SUPPORT, Rear Axle (2)
26	9-0362	SCREW, 1/4 - 20 x 5/8" Hex Washer Head, Self-Tapping (4)
27	9-1214	KEY, #HP - 506 Hi-Pro
28	1-5780	PULLEY, Traction Drive
29	9-0201	SCREW, 5/16 - 18 x 5/16" Hex Socket Set
30	7-6979	NUT, 3/8 - 16 Hex Nyloc (2)
31	2-6631	HUB, Blade Drive
32	2-6427	BLADE, 21" Bagging (Shown)
-	2-6428	BLADE, 21" Mulching
-	3-3956	BLADE, 21" Recycling
33	7-9268	WASHER, 3/8 Split Lock (Heavy)
34	9-0483	SCREW, 3/8 - 24 x 1-3/4" Hex Head Cap, Grade 5
35	9-0143	BOLT, 3/8 - 16 x 1-1/4" Hex Flange Lock (2)
36	2-4540	HUB CAP, Rear Wheels (2)
37	5-3508	ASSEMBLY, Rear Drive Wheels (2) (Includes Item 38)
38	2-4541	BUSHING, Rear Wheel (2)
39	2-4750	BELT, Traction Drive
40	2-8438	DECAL, Height Adjustment
41	2-8442	DECAL, Deck (Right Side)
42	9-1020	PUSH-NUT, 1/4"
43	9-1191	RIVET, 3/16 x 1/2" Steel (2)
44	3-3752	PLATE, Height Adjustment
45	9-1238	BOLT, 5/16 - 18 x 1" Carriage, Grade 5 (4)
46	9-0999	SCREW, 1/4 - 20 x 5/8" Truss Head Torx (2)
47	9-0055	WASHER, 1/4 Flat (2)

(Continued On Next Page)

Section I - GENERAL INFORMATION

PARTS LIST - MOWER DECK, WHEELS (Continued)

ITEM	PART NO.	DESCRIPTION
48	2-4753	SHIELD, Trailing
49	2-4754	ROD, Trailing Shield Pivot
50	2-8448	DECAL, Brigg's & Stratton, 5.5HP Diamond-Plus I/C (Shown)
-	2-8449	DECAL, Brigg's & Stratton, 5.5HP Diamond-Plus I/C OHV
51	2-8441	DECAL, "Exclusive Platinum Series", Brigg's & Stratton Engine
52	2-8439	DECAL, Convertible Mower
53	2-6809	DECAL - WARNING
54	2-8445	GRASSBAG, SNAPPER Platinum Series
55	5-3176	ASSEMBLY, Catcher Frame (Includes Item 55)
56	2-6421	GRIP, Catcher Frame
57	2-6390	PLUG, Mulching
58	2-6714	CHUTE, Side Discharge (Includes WARNING Decal)
-	**	ENGINE, 5.5HP Brigg's & Stratton I/C Diamond-Plus Model 129802, Type 1512, Trim 21
-	**	ENGINE, 5.5HP Brigg's & Stratton OHV Diamond-Plus Europa Model 99772, Type 3625, Trim 01

** PURCHASE ENGINE & ENGINE PARTS, OTHER THAN THOSE LISTED, FROM ENGINE SERVICE OUTLETS.

KITS AVAILABLE	
Part No.	Description
6-1396	KIT, Grass Catcher
6-1397	KIT, Side Discharge Chute
6-1398	KIT, Mulching

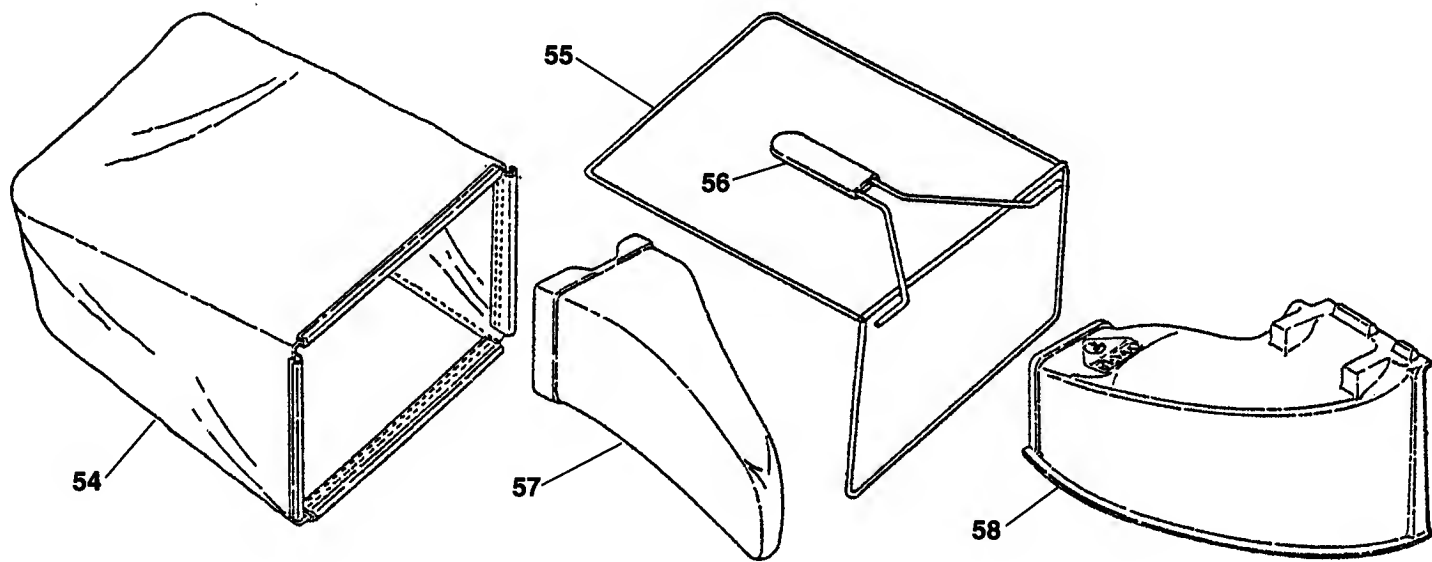


FIGURE 1.5

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Section I - GENERAL INFORMATION

PARTS LIST - AXLE/TRANSMISSION

ITEM	PART NO.	DESCRIPTION
1	5-3067	AXLE/TRANSMISSION ASSEMBLY (Includes Items 2 thru 23)
2	2-6231	ASSEMBLY, Transmission
3	4-1363	ASSEMBLY, Rear Axle Weldment
4	2-4573	SHIELD, Dust (2)
5	2-4749	PIN, Pawl, 3/16 O.D. (2)
6	2-4549	PINION, Right Hand Drive
7	2-4550	PINION, Left Hand Drive
8	1-4341	RING, Retaining (4)
9	9-1194	WASHER, .531 I.D. x 1.50 O.D. (2)
10	2-6478	RETAINER, Pinion Seal (2)
11	2-6479	SEAL, Pinion (Felt) (2)
12	2-5066	ASSEMBLY, Bearing Carrier (2)
13	2-4715	BUSHING, Rear Axle (2)
14	2-4748	TUBING, 5/8" I.D., Convolute
15	9-0361	SCREW, 5/16 - 18 x 5/8" Hex Washer Head, Self-Tapping (2)
16	3-3768	BRACKET, Transmission
17	9-1187	NUT, M10 - 1.50 Hex Nyloc
18	2-4747	PULLEY, Transmission
19	2-4879	WASHER, Felt
20	9-1084	SCREW, 1/4 - 20 x 3/8" Hex Washer Head, Self-Tapping (4)
21	2-6420	GRIP, Rear Axle
22	6-1272	KIT, Height Adjusting Lever (Includes Items Listed Below)
-	3-3967	LEVER, Height Adjusting
-	9-1240	SCREW, #10 - 32 x 5/8" Hex Washer Head, Grade 5 (2)
-	9-0376	NUT, #10 - 32 Hex Nyloc (2)
23	2-6232	SPRING, Transmission Extension

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Section II

TROUBLESHOOTING

Section II - TROUBLESHOOTING

When problems occur, always look for the simplest causes first, even though they may seem too obvious to consider. For example, don't go ahead and replace the Transmission Assembly without first eliminating other possible and easier to remedy causes for the drive problem. The Guide below, and on the following page, has been developed with the simplest cause listed first.

PROBLEM	POSSIBLE CAUSE(S) AND PROBABLE REMEDY
WILL NOT START	1. IMPROPER PRIMING <ol style="list-style-type: none"> Primer button not pushed 2 times on cold engine. Throttle control left in stop or run position. Move knob to Fast. Throttle cable setting incorrect. Reset to correspond to knob positions.
	2. NOT GETTING FUEL <ol style="list-style-type: none"> Fuel tank empty. Replenish fuel supply. Fuel line clogged. Clean out. Carburetor faulty or gummed up. Carburetor reconditioning required.
	3. NO IGNITION SPARK <ol style="list-style-type: none"> Blade control not held against upper handle. Ignition lead loose or off spark plug. Reconnect lead. Interlock preventing startup due to incorrectly installed grass bag adaptor, mulching cover or side discharge chute. Reinstall. Spark plug electrode fouled by deposits, oil or fuel. Remove plug and service or replace.
	4. OTHER CAUSES <ol style="list-style-type: none"> Engine faulty. Consult Engine Manual. Interlock faulty. Test and replace assembly as required.
DIFFICULT TO START	1. FUEL RELATED CAUSES <ol style="list-style-type: none"> Throttle control in wrong position, causing too rich fuel mixture when engine hot or too little when cold. Adjust cable. Water or other impurities in fuel. Dump fuel and replenish with clean, fresh supply. Air cleaner clogged causing rich mixture. Service element.
	2. OTHER CAUSES <ol style="list-style-type: none"> Dense grass restricting free rotation of blade as engine is cranked. Move mower to clear area. Weak ignition spark. Check for and correct loose connections, poor contacts and faulty plug. Carburetor malfunctioning. Reset to specifications or have reconditioned.
STOPS SUDDENLY	1. FUEL RELATED CAUSES <ol style="list-style-type: none"> Fuel run dry. Refill tank after proper cooling off period. Carburetor main fuel needle vibrated closed. Reset to specifications.
	2. OTHER CAUSES <ol style="list-style-type: none"> Blade jammed by solid object or accumulation of grass. Disconnect spark plug lead and unclog. Ignition lead wire disconnected or grounded by branch, shrub, etc. Reconnect. Interlock stops operation due to loose bag adaptor, mulching cover or side chute. Reposition and retighten. Engine stops due to overheating or internal malfunction. Locate & correct cause.

Section II - TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE(S) AND PROBABLE REMEDY
VIBRATES EXCESSIVELY	1. CUTTING BLADE RELATED <ol style="list-style-type: none"> Blade loose. Retighten retaining capscrew. Blade improperly installed on hub. Make sure rim fits over hub flange. Blade out of balance due to impact damage. Replace blade.
	2. ENGINE RELATED <ol style="list-style-type: none"> Engine mounting bolts loose or missing. Install replacements and/or loose bolts. Engine crankshaft bent. See engine dealer for straightening or replacement.
MOWING/BAGGING PROBLEMS	1. CUTS POORLY <ol style="list-style-type: none"> Wheels set lower on one side. Reposition to correct height setting. Blade cutting edges worn dull. Sharpen or replace. Engine speed too low for conditions. Reset speed.
	2. BAGS IMPROPERLY <ol style="list-style-type: none"> Grass bag too full or pores clogged. Thoroughly empty and clean bag. Cutting height set too low for conditions. Raise height. Engine speed set too low for bagging. Increase engine speed and/or decrease ground speed.
WILL NOT PULL PROPERLY WHEN WHEEL DRIVE CONTROL IS ENGAGED	1. BELT SLIPPAGE <ol style="list-style-type: none"> Check for excessive wear on poly V-Belt. Replace worn belt. Transmission spring tension adjustment too loose. Readjust spring.
	2. TRANSMISSION <ol style="list-style-type: none"> Transmission faulty. Replace transmission. Transmission fluid level low. Fill to proper level.
MOWER CANNOT BE PULLED TO THE REAR (OR) MOWER WILL ONLY TRAVEL IN A CIRCLE	1. DRIVE WHEELS <ol style="list-style-type: none"> Pinion gears have been incorrectly installed. Check markings on pinion gears - "L" for left side; "R" for right side. Missing or broken part in drive assembly. Check drive assembly.
	2. TRANSMISSION Transmission faulty. Replace transmission.

SERVICE NOTES

Lined area for service notes.



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Section III

WHEELS & AXLES

Section III - WHEELS & AXLES

INTRODUCTION

On Push Models, the front and rear wheels are the same. This same wheel is also used on the front of Self-Propelled Models. These wheels have plastic hubs which ride on steel axles. After extended use, the inside diameter of the wheel hub may wear enough to cause the wheel to wobble. In this event, replace the wheel with a new PN 2-8456 Assembly as follows:

WHEEL REPLACEMENT

Raise and support mower off wheel to be replaced.

Use flat end of screwdriver blade to pry wheel cover off hub. See Figure 3.1.

Remove hairpin and flat washer from axle.

Slide worn wheel off axle and install new in its place.

Secure wheel to axle with the 1/2" flat washer and hairpin.

Snap wheel cover into the recess in hub of wheel.

Note that the rear wheels on self-propelled models are considered part of the transmission. These are covered in Section IV.

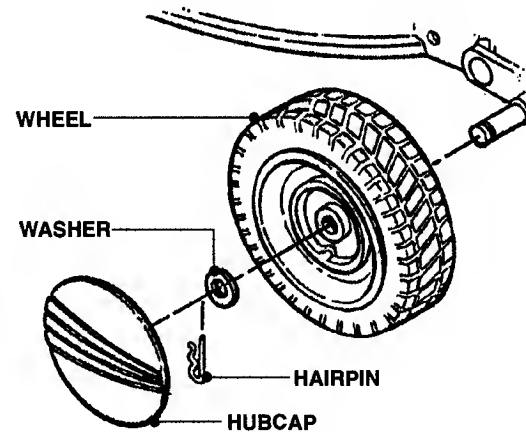


FIGURE 3.1

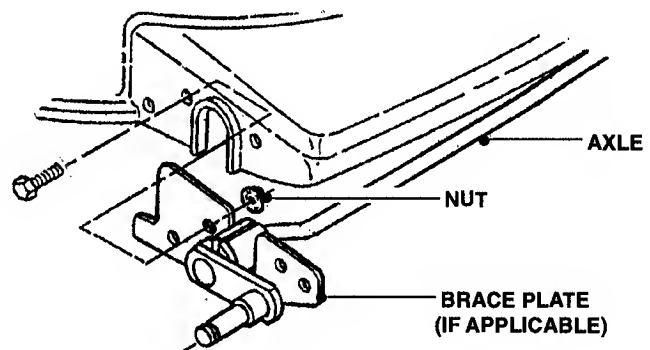


FIGURE 3.2

FRONT AXLES - ALL MODELS

The front axle components are the same on all models. Replacement of these components should not be necessary unless the axle becomes bent from impacting a solid object. The axle bushings serve only as pivots for raising and lowering the mower deck and are not normal wear items. If replacement is needed, proceed as follows:

Remove both front wheels as described earlier in this section.

Remove capscrew and nut securing brace plate (if so equipped - part of Kit 6-1388) to right front side of deck or remove axle retaining spring on right side. See Figure 3.2.

Remove axle retaining spring on left front side.

Detach height adjuster tie bar from left side of axle bracket by removing wheel retainer. See Figure 3.3.

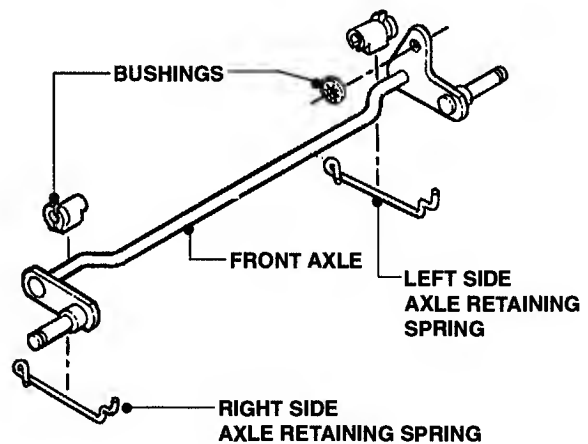


FIGURE 3.3

Section III - WHEELS & AXLES

Lower front axle out of recesses on both sides of deck.

Replace bushings (PN 2-4558) or front axle as an assembly (PN 4-1344) as needed. Reverse above procedure to install components.

REAR AXLE - PUSH MODELS

Should the rear axle or bushings need replacing on a Push Model, proceed as follows:

Remove both rear wheels as described earlier in this section.

Disconnect the height adjuster tie bar from left side of axle bracket by removing tie bar pin. See Figure 3.4.

Remove rear axle supports on both sides of deck by removing the 1/4 - 20 x 5/8" self-tapping screws.

Lower rear axle assembly out of recesses on both sides of deck.

Replace the rear axle bushings, if needed, with new PN 2-4883 bushings.

If the rear axle has to be replaced, remove the two screws and nuts securing the height adjusting lever to rear axle. Transfer these items to the replacement axle (PN 4-1376).

If the height adjuster lever needs replacement, order and install Kit PN 6-1272.

Reverse above procedure to install rear axle to mower deck.

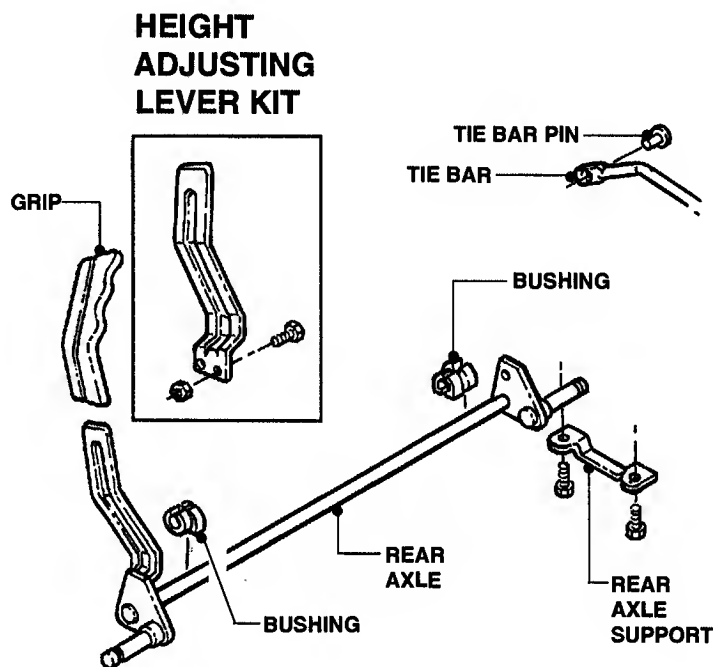


FIGURE 3.4

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Section IV

REAR WHEELS, TRANSMISSION & DRIVE SYSTEM

Section IV - REAR WHEELS, TRANSMISSION & DRIVE SYSTEM

INTRODUCTION

The rear wheels are part of the drive system of Self-Propelled models. The transmission is a sealed unit which is driven off a V-belt connected to the engine drive pulley. Service drive system components as follows:

TRACTION DRIVE BELT REPLACEMENT

TRACTION DRIVE BELT REMOVAL

Remove grass bag.

Remove the two retaining screws from the drive belt/tie rod cover and remove cover. See Figure 4.1.

Stand mower on rear wheels.

Remove the blade mounting screws and nylon lock nuts from blade. See Figure 4.2.

Remove blade.

Roll old belt off of engine pulley.

Remove old belt from transmission pulley. Discard old belt.

TRACTION DRIVE BELT REPLACEMENT

Place new belt, Part No. 2-4750 into engine pulley and route through the deck housing to the transmission pulley. See Figure 4.2.

Carefully roll new belt onto transmission pulley.

Install mower blade onto blade hub with flanges down. See Figure 4.3.

Install blade mounting screws and nylon lock nuts.

Torque blade mounting screws and nylon lock nuts to 30-17 ft. lbs.

Replace drive belt/tie rod cover and secure with the two retaining screws.

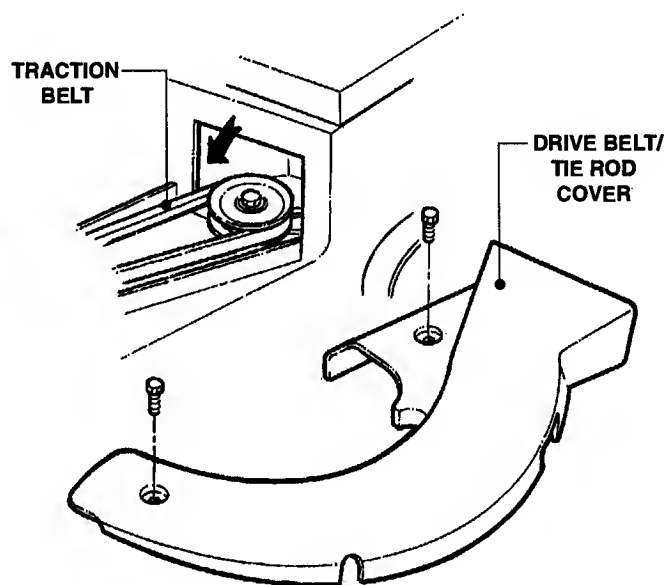


FIGURE 4.1

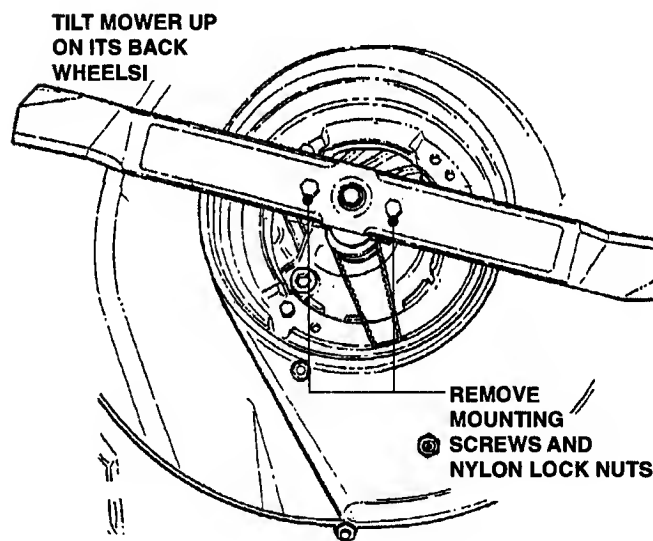


FIGURE 4.2

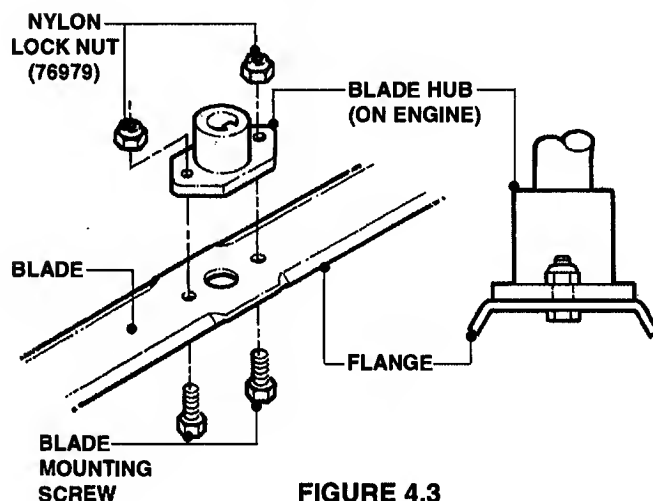


FIGURE 4.3

Section IV - REAR WHEELS, TRANSMISSION & DRIVE SYSTEM

REAR DRIVE WHEELS (See Figure 4.4)

Raise and support rear of mower deck.

Use flat screwdriver blade to pry wheel cover off hub of rear wheel.

Remove hairpin and flat washer from axle shaft.

Remove both rear wheels. Inspect bushing for wear. If required, install new bushings.

Inspect condition of wheel hubs. Replace wheel if required.

NOTE:

Leave wheels off until later if servicing pinions or replacing transmission.

Reverse above procedure to install rear wheel components.

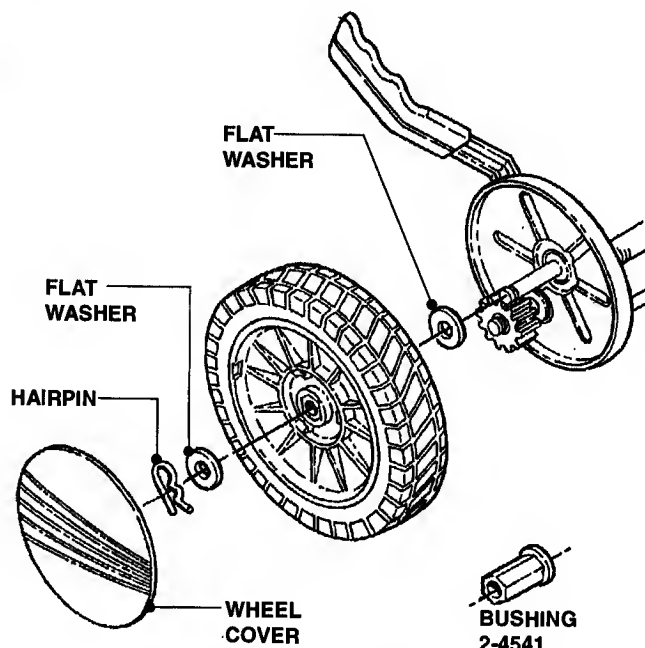


FIGURE 4.4

PINION GEAR SERVICE

The pinion gears are driven off the transmission and mesh with gear slots on the inside hubs of the rear wheels to provide traction. Under normal conditions, the pinions or gear slots should not wear sufficiently to call for replacement. Pinions should, however, be removed and lubricated at the beginning of each new season. Pinion components should be left off until after the transmission is replaced, if this is to be done. Remove pinion components after removing rear wheels as follows. See Figure 4.5.

Remove retaining ring and slide pinion off transmission axle shaft.

Push pawls out of holes in transmission axle.

Remove dust shield, felt seal washer and seal retainer.

Clean old grease out of recess inside pinion, then fill recess with new wheel bearing grease.

Clean seal retainer and felt seal or replace with new seal (PN 2-6479).

Note that the pinions are marked with the letter R for right side or L for left side as shown in Figure 4.6. Be sure these are installed on correct side or mower may drive in circles or may not drive in reverse.

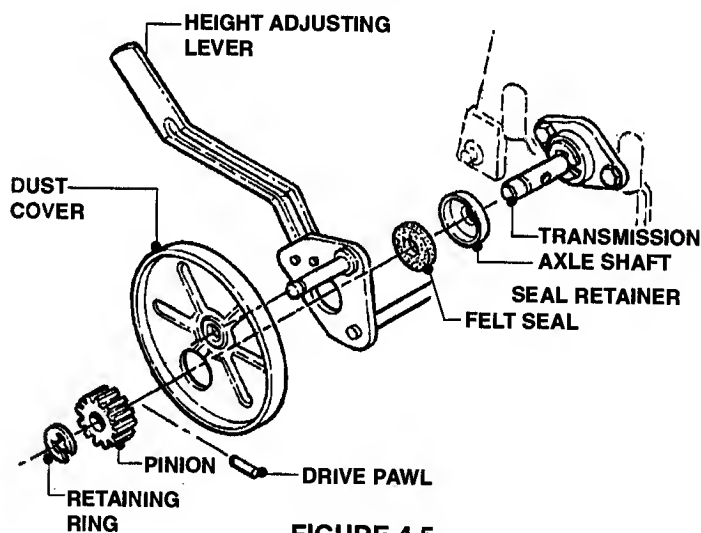


FIGURE 4.5

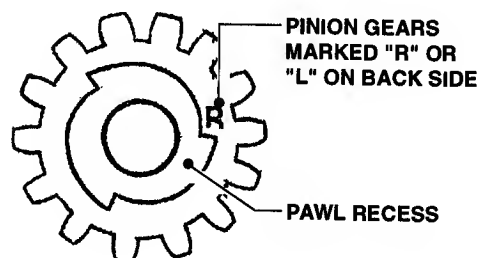


FIGURE 4.6

Section IV - REAR WHEELS, TRANSMISSION & DRIVE SYSTEM

Leave pinion drive components off until after the transmission has been replaced, if this has to be done.

Reverse procedure to install serviced pinion drive components and rear drive wheels.

TRACTION CLUTCH ADJUSTMENT

Should a loss of traction (Self-Propelling) be experienced and the traction drive belt is in good condition, test and adjust the traction clutch as follows:

TESTING THE TRACTION CLUTCH ADJUSTMENT

Stop the engine, remove the spark plug wire from the spark plug and secure wire away from plug.

Hold the blade/engine control against the handlebar. See Figure 4.7.

Pull the traction control toward the handlebar until all slack is removed from the cable and a slight resistance is felt.

Visually check the alignment of the 1/8" diameter holes in the blade control and the traction control. See Figure 4.8.

If the hold in the traction control is above or below the hole in the blade control, continue with adjustment.

TRACTION CABLE ADJUSTMENT

Locate the traction cable turnbuckle, located in-line on the cable, approximately half-way down the right leg of the handlebar. See Figure 4.9.

Should the hole in the traction control be below the hole in the blade control, rotate the center section of the turnbuckle counterclockwise (as viewed from the operator's position). If the hole in the traction control is above the hole in the blade control, rotate the turnbuckle clockwise (as viewed from the operator's position). See Figure 4.9.

Rotate the center section of the turnbuckle one complete rotation for each 1/2 of hole adjustment required.

Continue adjustment of the turnbuckle until holes are fully in alignment with each other. See Figure 4.8.

Place spark plug wire onto spark plug and start engine.

NOTE:

If the mower "creeps" when the traction control is released, the traction is too tight and the turnbuckle should be rotated clockwise until all "creeping" is eliminated.

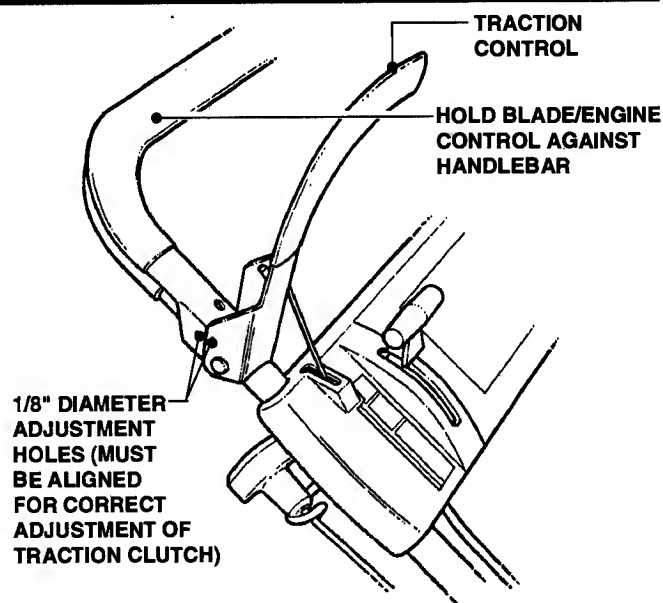


FIGURE 4.7

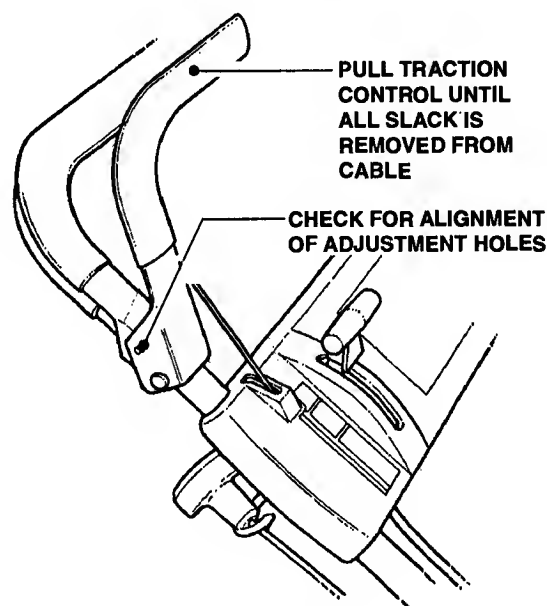


FIGURE 4.8

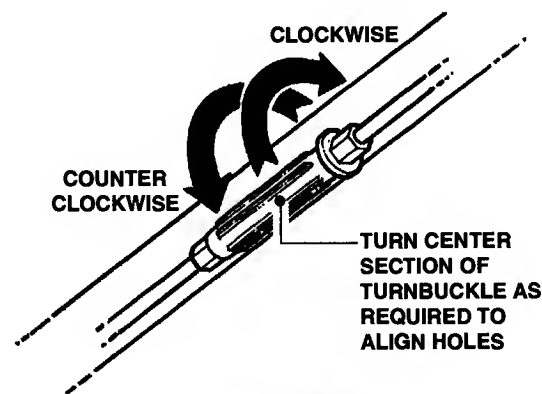


FIGURE 4.9

Section IV - REAR WHEELS, TRANSMISSION & DRIVE SYSTEM

TRANSMISSION REPLACEMENT

The three speed transmission used on these models is a sealed unit requiring no regular service. If it malfunctions, do not attempt to overhaul it, but replace it as a unit (PN 2-6231). It is offered at a special low price for unit replacement. Individual parts are not offered. Replace transmission as follows. See Figure 4.10.

Remove rear wheels, pinion drive, dust shields, etc. as described earlier in this section.

Remove drive belt as described earlier in this section.

Remove bearing carriers on both sides by removing two 1/4 - 20 x 3/8" self-tapping screws, then remove the bushings.

Remove the rear axle supports on both sides by removing the 1/4 - 20 x 5/8" self-tapping screws.

Disconnect the transmission extension spring and control cable spring.

Lower the transmission/axle as an assembly from underside of mower deck, then separate rear axle from transmission.

Slip the convoluted tubing off left side on transaxle and save for use on new unit.

Remove the M10-1.50mm locknut from transmission pulley and transfer pulley and locknut to replacement transmission.

Remove the transmission bracket from old unit by removing the two 5/16 - 18 x 5/8" self-tapping screws. Transfer these to replacement unit.

Reverse above steps to install new transmission. Reassemble pinions, rear axle, rear wheels and other drive components.

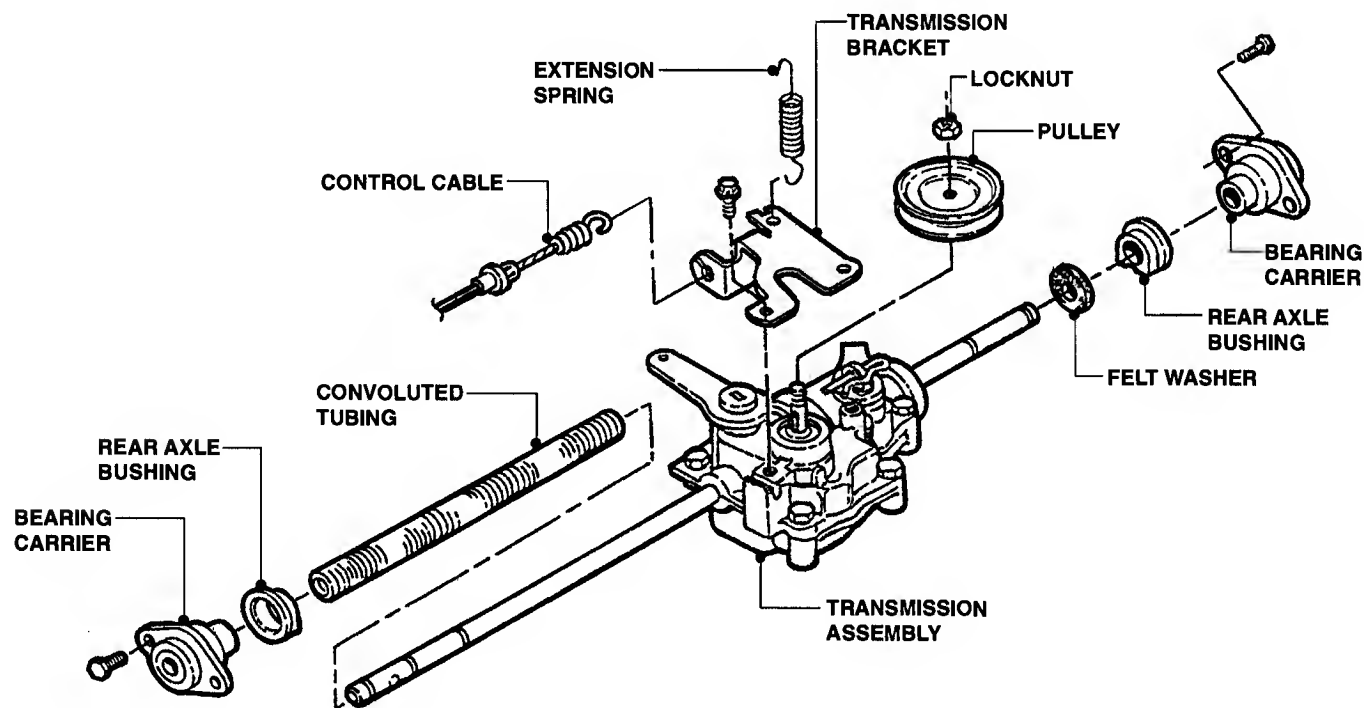


FIGURE 4.10

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Section V

ENGINE REPLACEMENT PROCEDURE

Section V - ENGINE REPLACEMENT PROCEDURE

INTRODUCTION

Briggs & Stratton and Kawasaki Engines are used to power these mowers. Replacement parts and repair services for the engines should be obtained from authorized engine manufacturer's dealers.

Different pulleys, keys, engine control cables, blade drive hubs and retainers are used on the two makes of engines. Refer to the **SNAPPER PLATINUM Parts Manual** for these part number differences. To replace a faulty engine, proceed as follows.

ENGINE REMOVAL PROCEDURE

(See Figure 5.1).

Disconnect throttle control cable from left side of the engine.

Disconnect the blade control/engine kill cable from engine.

Unhook starter rope from the guides on right side of upper handle.

Remove belt drive cover, tilt transmission forward and disconnect V-belt from pulley on transmission.

Working from underside of mower deck, remove blade and blade drive hub from engine drive shaft. The belt drive pulley may also be separated from engine now or after the engine has been pulled.

Remove the three self-tapping screws securing engine to mower deck. On Briggs engines, 3/8 - 18 x 1" screws are used. On Kawasaki, M10-1.50mm screws and 7/16" internal tooth lock washers are used.

Lift faulty engine out from topside of mower deck.

Transfer items such as the pulley and blade hub to the replacement engine. If changing engine make, be sure to use the correct items for the engine involved.

Reverse above procedure to install new or rebuilt engine on mower.

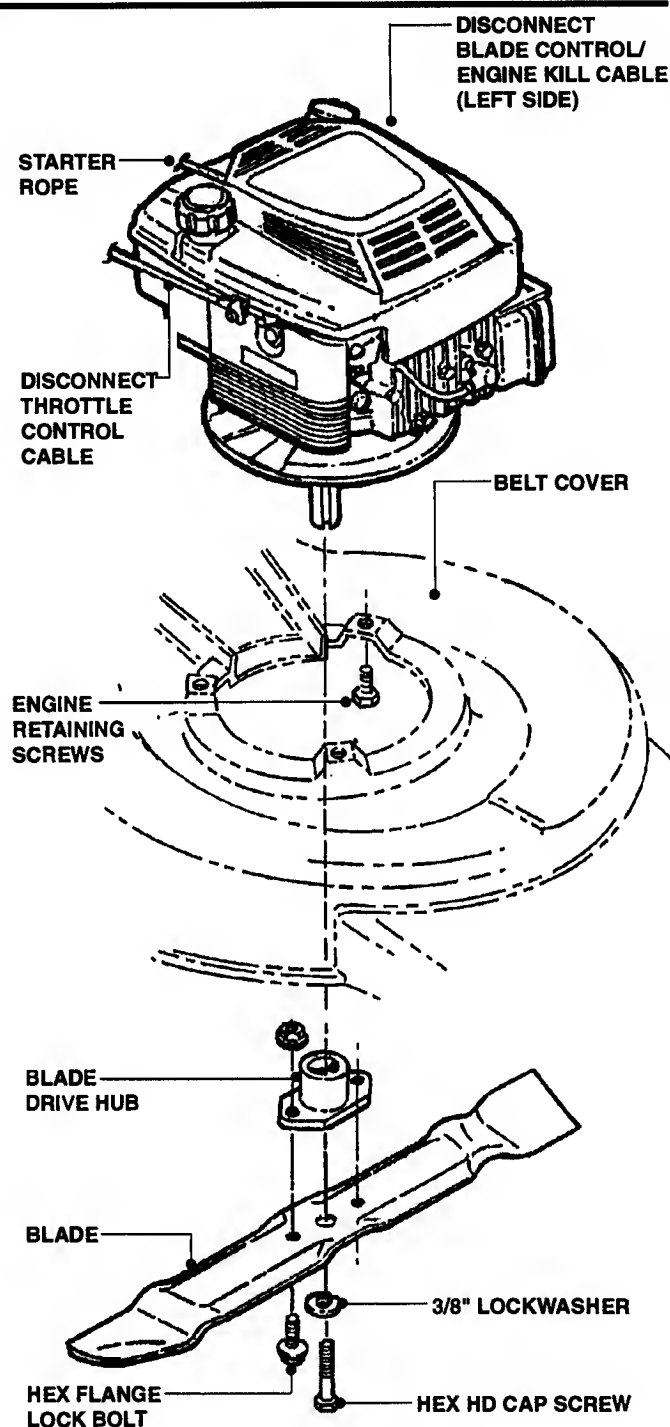


FIGURE 5.1

Section VI

HANDLEBAR/CONTROLS

Section VI - HANDLEBAR/CONTROLS

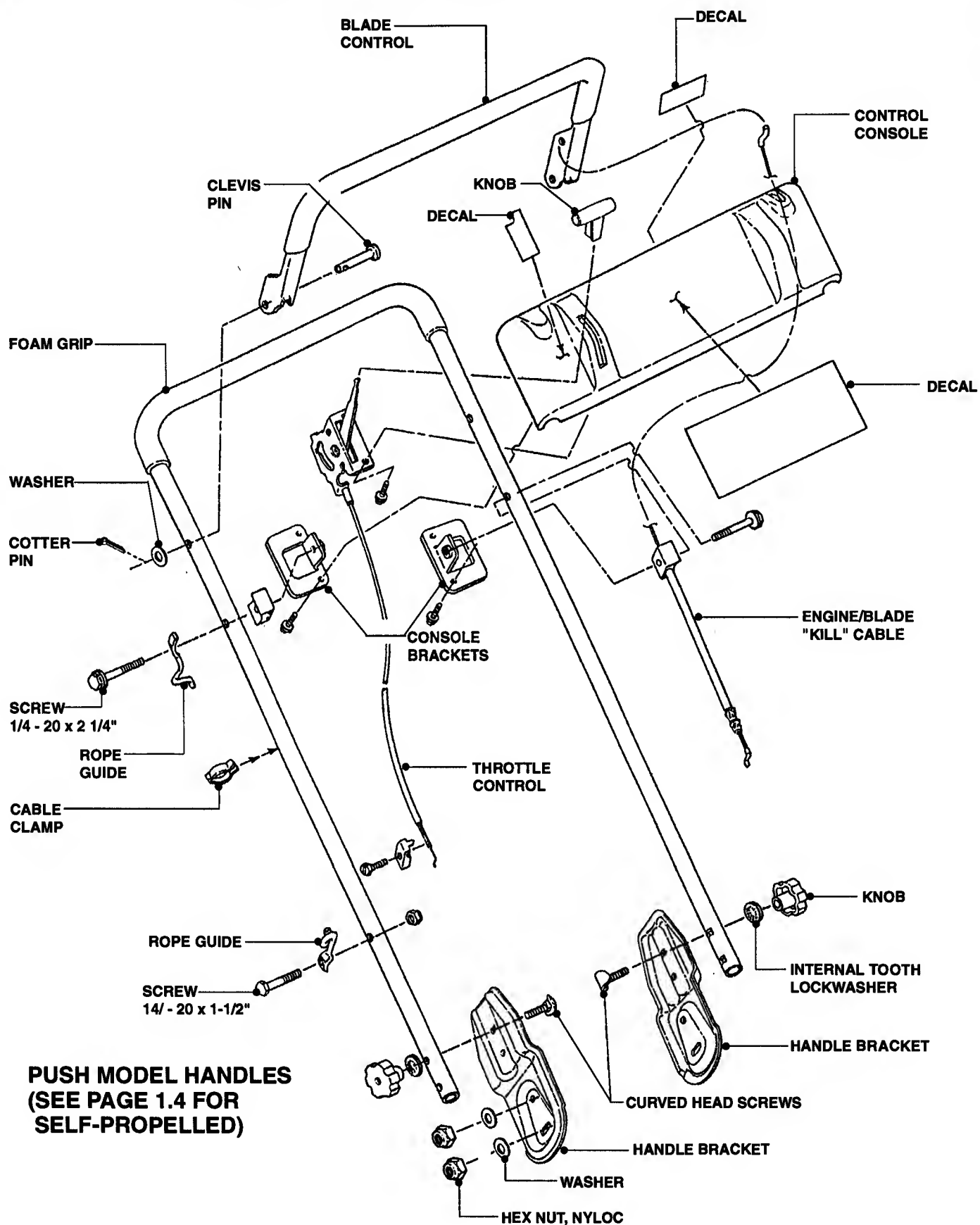


FIGURE 6.1

Section VI - HANDLEBAR/CONTROLS

ADJUSTING HANDLEBAR

Loosen handlebar support mounting nuts. See Figure 6.2.

Raise or lower handlebar to most comfortable position.

Torque mounting nuts to 18-23 ft. lbs.

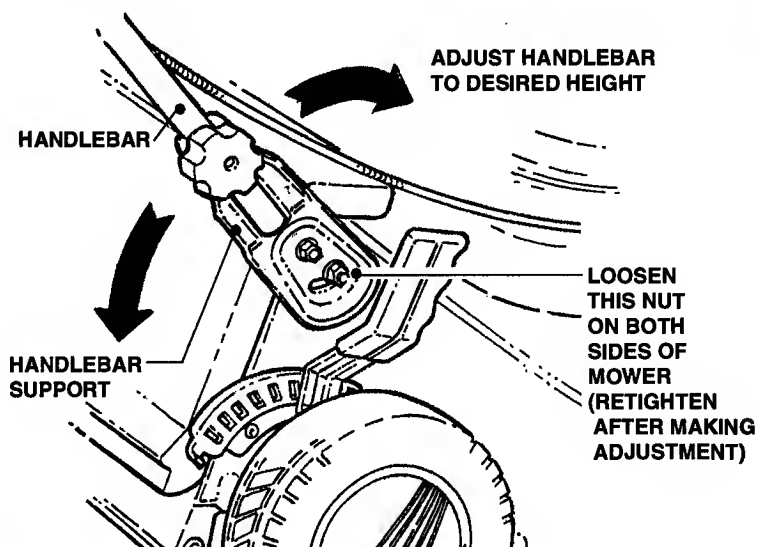


FIGURE 6.2

REPLACING THROTTLE CONTROL

Remove throttle control knob. Refer to Figure 6.1, Page 6.2.

Remove the two #10-16 x 1/2" Hex Washer Head, Self-Tapping Screws which secure the throttle control to the underside of the control panel.

If applicable, remove the cable clamp securing the throttle control to the upper handle.

Remove the cable clamp from the engine air filter. See Figure 6.3.

Disconnect the throttle control cable from the throttle lever.

Install new throttle control cable in reverse order.

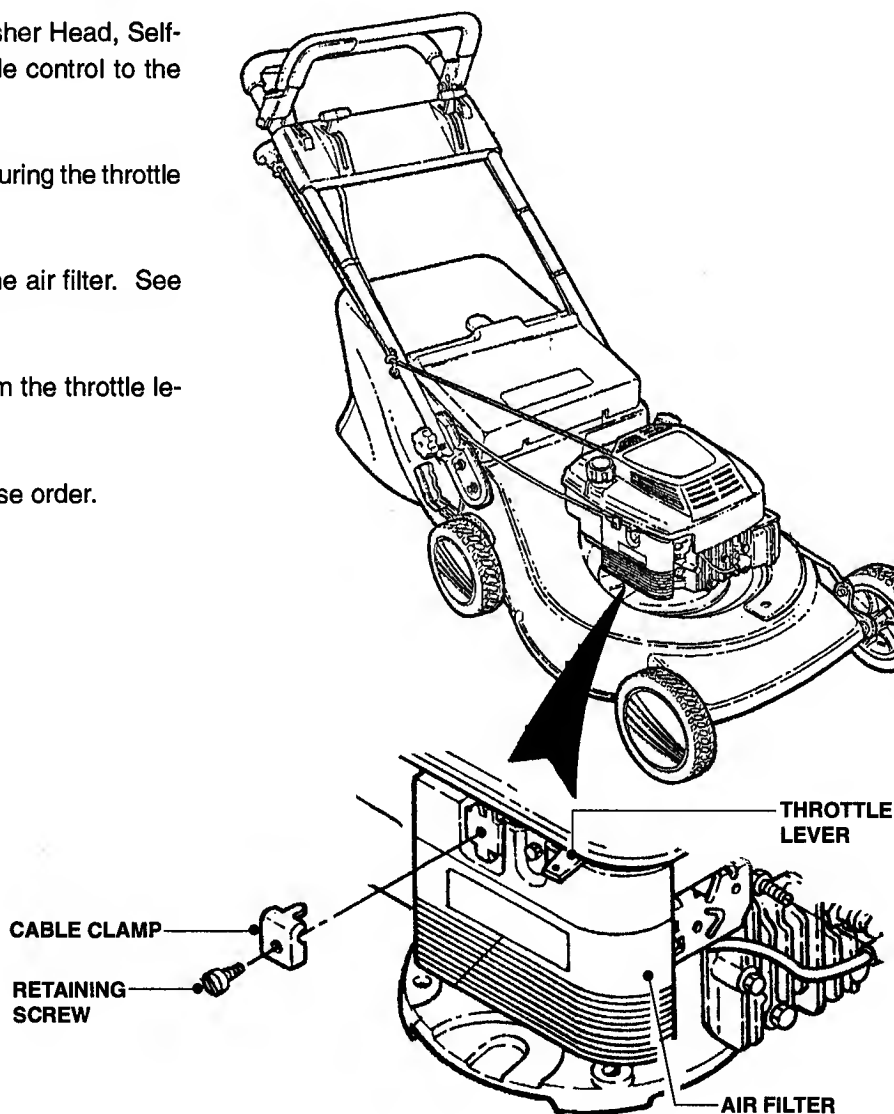


FIGURE 6.3

This image shows a single page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or printed text on the page. A small dark mark is visible near the center-left edge.

Section VII

MOWER DECK & COMPONENTS

Section VII - MOWER DECK & COMPONENTS

INTRODUCTION

This section will cover sharpening and replacement of the different cutting blades, deck replacement, trailing shield replacement and the attachment of the mulching and side discharge covers. For information concerning those mower parts attached to the deck and lower handle mounts (i.e., engine, transmission, height adjusters, etc.), refer to the "TABLE OF CONTENTS" on the inside front cover.

SHARPENING CUTTER BLADE

STANDARD BLADE WEAR LIMIT

Check the blade condition of each mower as it is brought in for repair. Use the drawings in Figure 7.1 to determine if a blade can be sharpened and safely reused, or if it must be replaced with a new part.

If the blade is badly chipped, bent, out of balance, or as soon as a notch begins to wear in the tip between the flat surface and upturned lift as depicted in illustration "B" of Figure 7.1, then the blade **MUST** be replaced.

"PLATINUM" BLADES	PART No.
Bagging Blade	2-6427
Mulching Blade	2-6428
Recycling Blade	3-3956

! WARNING!

Never allow a customer to take a mower out of your repair shop with the blade worn to the extent shown in Illustration "C" of Figure 7.1, without warning that customer of the danger that a tip could fly off and cause either personal injury or property damage.

BLADE SHARPENING

Disconnect spark plug wire and secure end away from plug.

Tilt mower up on its rear wheels. Do not tilt mower with spark plug or carburetor down.

Block blade with piece of wood to prevent it from turning.

Hold locknuts on topside of blade hub and remove blade mounting screws, then remove blade.

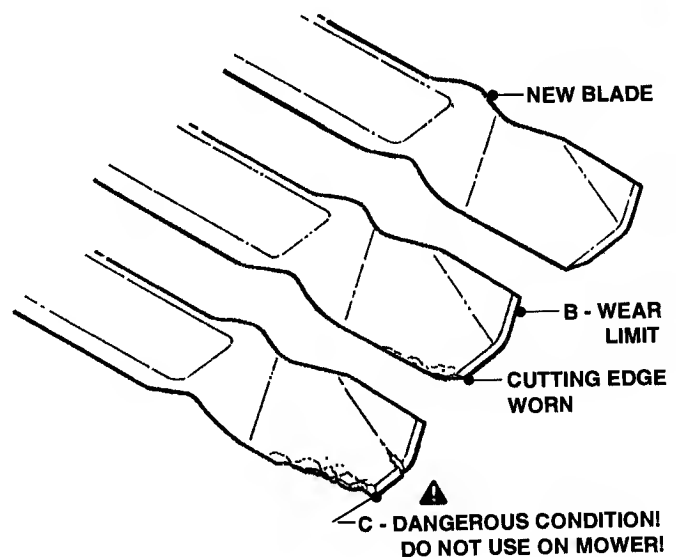


FIGURE 7.1

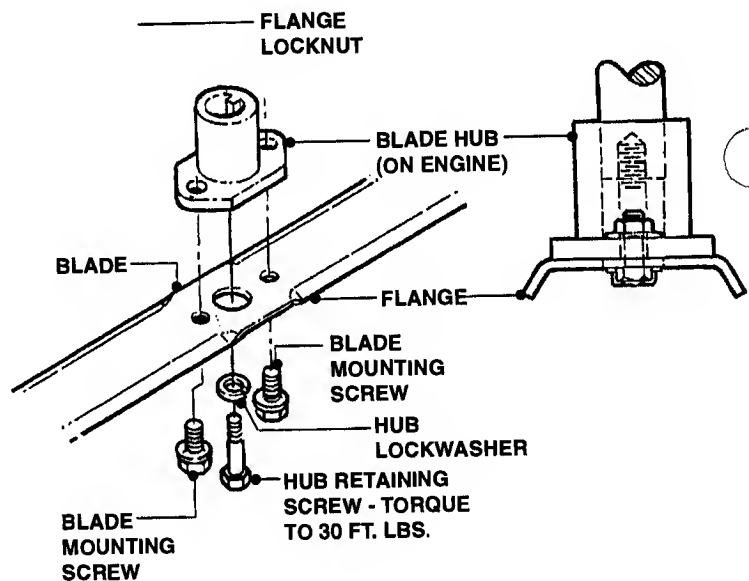


FIGURE 7.2

! CAUTION

Install blade **EXACTLY** as shown in Figure 7.2. Flanges on Blade face towards the ground.

Section VII - MOWER DECK & COMPONENTS

Sharpen blade on a grinding wheel at an angle of 22 to 28 degrees. The cutting surface should extend inward about 2-1/2" from the tip. See Figure 7.3. Be sure to wear goggles when sharpening blade.

Check blade for balance. To check blade balance, drive a nail into a supported surface, or clamp a nail in a vise. Place the blade center mounting hole on nail. If necessary, correct balance by grinding heavy end of blade. Reinstall blade.

⚠ CAUTION!

Avoid cutting yourself on a sharp blade! Wear gloves to protect your hands while handling the blade.

NOTE:

Make sure that the beveled cutting edges of both blades are "UP" after blades are installed on mower! See Figure 7.4.

CUTTING HEIGHT MECHANISM

These mowers feature a single cutting height adjuster, located on the right rear side, which raises or lowers all four wheels at the same time. The adjustment lever is shown in Figure 7.4. The lever is connected to the front and rear wheel axles by a spring-loaded tie bar mechanism. If this mechanism fails to raise or lower the deck, check to make sure the spring is properly connected to the deck. See Figure 7.5. Replace height adjuster components, if needed, as follows.

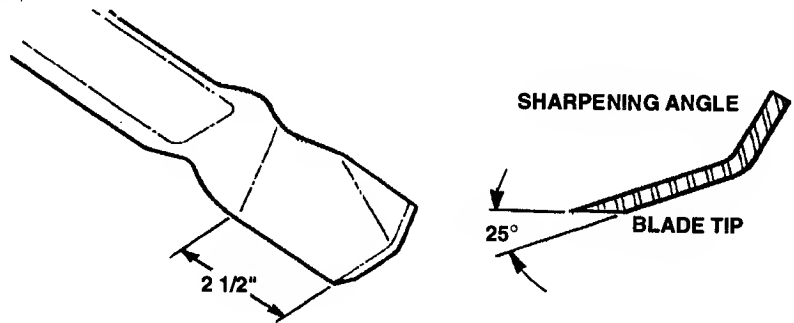


FIGURE 7.3

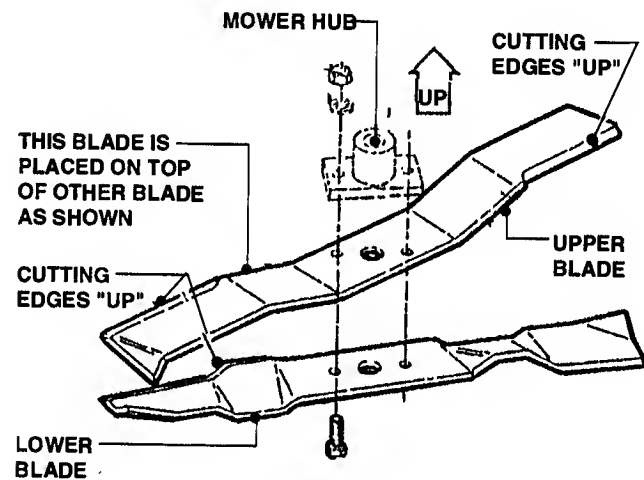


FIGURE 7.4

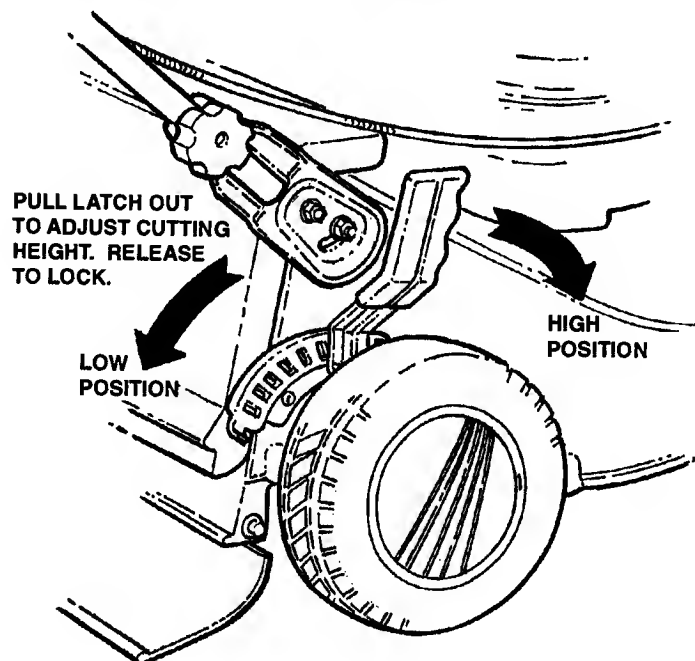


FIGURE 7.5

Section VII - MOWER DECK & COMPONENTS

If the height adjustment plate needs replacing, break off the old rivets holding the plate to deck and install a new Part No. 3-3752 Plate in its place. Secure it with two new Part No. 9-1191 Steel Rivets. See Figure 7.6.

If the height adjusting lever needs replacing, order and install Kit No. 6-1272 in place of old lever. Install new Part No. 2-6420 Grip on the lever if the old grip cannot be used. Refer to Section I - GENERAL INFORMATION, Page 1.10.

Replace the tie bar, as necessary, by removing the deck cotter pin from the tie bar spring. Pull the pins holding the bar to the front and rear wheel axles.

Replace tie bar components with new parts as called out on drawing on Page 1.7, Section 1.

DISCHARGE DOOR/BAFFLE

If the rear discharge door or baffle needs replacing, proceed as follows:

DISCHARGE DOOR (See Figure 7.7)

Raise door. Remove two 1/4 - 20 x 5/8" Torx head screws and 1/4 flat washers holding door spring and door to the discharge opening in rear of mower deck.

Install new Part No. 5-2881 Discharge Door Assembly to deck using the Torx head screws and flat washers, just removed.

If decals are not included on the replacement door, be sure to affix new Part No. 2-6236 and Part No. 2-6809 Decals in proper places on the door.

DISCHARGE BAFFLE

Replace damaged discharge baffle from bottom of mower deck by removing the #10 - 24 x 5/8" self-tapping screws.

Install new Part No. 2-4595 Baffle and secure to deck using the same #10 screws, just removed.

TRAILING SHIELD REPLACEMENT

In the event the trailing shield becomes cracked or otherwise damaged, replace it by removing the push nut on right end of the pivot rod. See Figure 7.8.

Pull the pivot rod out to the right side of deck and remove the damaged trailing shield.

Install new Part No. 2-4754 Pivot Rod, if needed, and new Trailing Shield Part No. 2-4753. Secure with a new Part No. 9-1020 Push Nut.

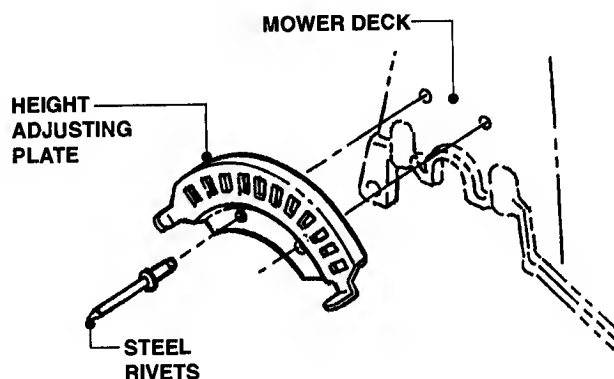


FIGURE 7.6

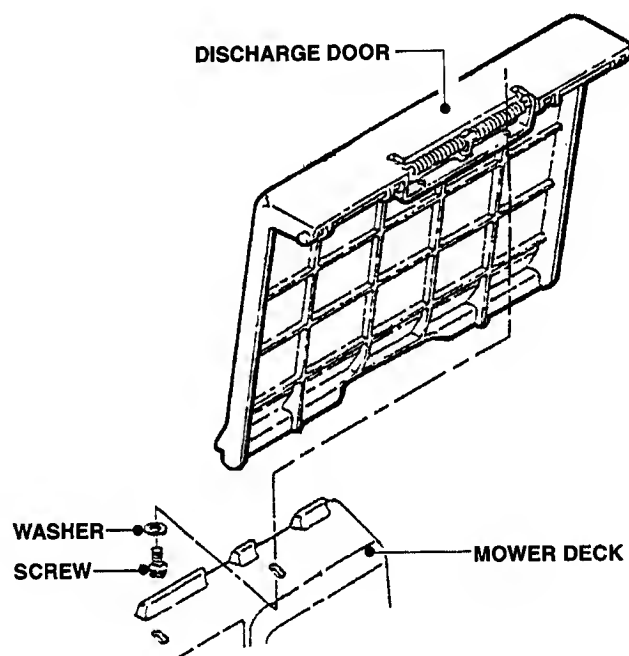


FIGURE 7.7

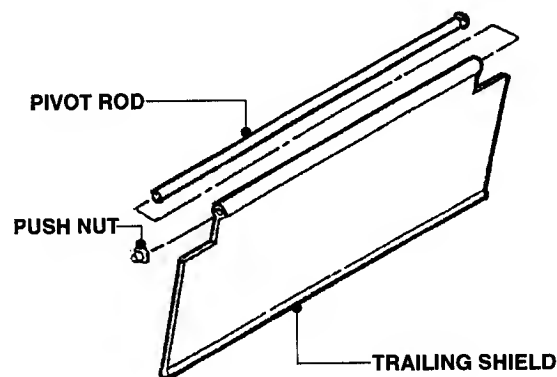


FIGURE 7.8

SERVICE NOTES

Service Manual for

SNAPPER®

**21" SERIES 0 "PLATINUM"
WALK BEHIND MOWERS
REAR DISCHARGE,
CAST ALUMINUM DECK**

MODELS:

L21550

NL21550

LP21550

NLP21550

& ELP21500KWV